

Visitor, Associates and Students' Programme (VASP)
presents Webinar Series on
Statistical Mechanics



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TITLE

What is the entropy of a tiger?

ABSTRACT

Equilibrium entropy refers to heat transfer (Clausius) and to properties of (energetic) spectra (Boltzmann-Planck), and has been foundational to equilibrium statistical mechanics for giving the probability of fluctuations and the structure of linear response. To reconcile in one protean entropy these various tasks for nonequilibrium systems as well sadly fails, except when close-to-equilibrium. Yet, tigers live far from equilibrium. The good news is that nonequilibrium heat capacities may still inform us about thermal properties of driven and active systems. They pick up frenetic contributions, yielding relevant dynamical information as well.

SPEAKER

Prof. Christian Maes, *KU Leuven, Belgium*

Prof. Christian Maes is a professor of theoretical physics at the Institute for Theoretical Physics of KU Leuven, Belgium. His primary areas of research are statistical physics, nonequilibrium thermodynamics and mathematical physics. Prof. Maes has made fundamental contributions towards understanding the role of entropy production and frenesy in characterizing dynamical fluctuations away from equilibrium. His current research interests include study of canonical nonequilibrium structures in dynamical and quantum large deviations, active matter and nonequilibrium calorimetry.

